

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A personal video recorder device, comprising:

input means receiving a video signal input and producing a live video signal as an output;
a disk drive storing a representation of the live video signal input as it is received by the input means and providing as an output a stored video signal;
output means for providing a video output signal;
switching means for routing a signal to the output means;
control means for controlling the switching means; and
wherein the control means receives user ~~commands and commands~~, and
responsive to a user command to change a received television channel when the stored video signal is being provided to the output means the control means [[,]] commands the switching means to route the live video signal to the output means and further commands the input means to change to the channel selected by the user.

2. (Original) The apparatus according to claim 1, wherein the input means comprises a tuner.

3. (Original) The apparatus according to claim 2, wherein the input means further comprises an analog to digital converter.

4. (Withdrawn) The apparatus according to claim 2, wherein the input means further comprises a demultiplexer.

5. (Original) The apparatus according to claim 1, wherein the output means comprises a modulator.

6. (Withdrawn) The apparatus according to claim 1, wherein the output means comprises a digital video formatter.

7. (Original) The apparatus according to claim 1, wherein the output means provides the output signal formatted as one of NTSC, PAL, DVI and MPEG.

8. (Original) The apparatus according to claim 1, wherein the output means further comprises a digital to analog converter receiving the stored video signal and converting the stored video signal to an analog form.

9. (Original) The apparatus according to claim 1, wherein the input means comprises a tuner and the output means comprises a modulator, and wherein the live video signal is routed by the switching means from the tuner to the modulator.

10. (Original) The apparatus according to claim 1, wherein the input means comprises a tuner and an analog to digital converter;

wherein the output means comprises a digital to analog converter and a modulator; and
wherein the live video signal is routed by the switching means from the analog to digital converter to the digital to analog converter.

11. (Withdrawn) The apparatus according to claim 1, wherein the input means comprises a tuner and a demultiplexer;

wherein the output means comprises a digital data formatter; and
wherein the live video signal is routed by the switching means from the demultiplexer to the digital data formatter.

12. (Original) The apparatus according to claim 1, wherein responsive to a user command to implement an effect using the disk drive, the control means commands the switching means to route the stored video signal to the output means.

13. (Original) The apparatus according to claim 12, wherein the effect comprises a live pause effect.

14. (Withdrawn) A personal video recorder device, comprising:

input means receiving a video signal input and producing a live video signal as an output;

a disk drive storing a representation of the live video signal input as it is received by the input means and providing as an output a stored video signal;
output means for providing a video output signal;
switching means for routing a signal to the output means;
control means for controlling the switching means; and
wherein the control means receives user commands and responsive to a user command to implement an effect using the disk drive, commands the switching means to route the stored video signal to the output means.

15. (Withdrawn) The apparatus according to claim 14, wherein the input means comprises a tuner.

16. (Withdrawn) The apparatus according to claim 15, wherein the input means further comprises an analog to digital converter.

17. (Withdrawn) The apparatus according to claim 15, wherein the input means further comprises a demultiplexer.

18. (Withdrawn) The apparatus according to claim 14, wherein the output means comprises a modulator.

19. (Withdrawn) The apparatus according to claim 14, wherein the output means comprises a digital video formatter.

20. (Withdrawn) The apparatus according to claim 14, wherein the output means provides the output signal formatted as one of NTSC, PAL, DVI and MPEG.

21. (Withdrawn) The apparatus according to claim 14, wherein the output means further comprises a digital to analog converter receiving the stored video signal and converting the stored video signal to an analog form.

22. (Withdrawn) The apparatus according to claim 14, wherein the input means comprises a tuner and the output means comprises a modulator, and wherein the live video signal is routed by the switching means from the tuner to the modulator.

23. (Withdrawn) The apparatus according to claim 14, wherein the input means comprises a tuner and an analog to digital converter;

wherein the output means comprises a digital to analog converter and a modulator; and

wherein the live video signal is routed by the switching means from the analog to digital converter to the digital to analog converter.

24. (Withdrawn) The apparatus according to claim 14, wherein the input means comprises a tuner and a demultiplexer;

wherein the output means comprises a digital data formatter; and

wherein the live video signal is routed by the switching means from the demultiplexer to the digital data formatter.

25. (Withdrawn) The apparatus according to claim 14, wherein responsive to a user command to change a channel, the control means commands the switching means to route the live video signal to the output means.

26. (Withdrawn) The apparatus according to claim 14, wherein the effect comprises a live pause effect.

27. (Currently Amended) A personal video recorder device, comprising:

a tuner receiving a video signal input and producing a live video signal as an output;

an analog to digital converter receiving the live video signal and converting it to a digital live video signal;

a disk drive receiving and storing the digital live video signal input as it is produced by the analog to digital converter and providing as an output a stored digital video signal;

a digital to analog converter receiving the stored digital video signal and producing an analog video signal;

an output circuit that provides an output signal suitable for display on a video display;
a switch that routes a signal to the output circuit;
a controller that directs the switch to provide one of the live video signal and the analog video signal to the output circuit; and
wherein the controller receives user ~~commands and~~ commands, and
responsive to a user command to change a received television channel when the stored video signal is being provided to the output circuit the controller [[,]] commands the switch to route the live video signal to the output circuit and further commands the tuner to change tuning to the channel selected by the user.

28. (Original) The apparatus according to claim 27, wherein the output circuit comprises a modulator.

29. (Original) The apparatus according to claim 27, wherein the output circuit provides the output signal formatted as one of NTSC, PAL, DVI and MPEG.

30. (Original) The apparatus according to claim 27, wherein responsive to a user command to implement an effect using the disk drive, the controller commands the switch to route the analog video signal to the output circuit.

31. (Original) The apparatus according to claim 30, wherein the effect comprises a live pause effect.

32. (Currently Amended) A personal video recorder device, comprising:
a tuner receiving a video signal input and producing a live video signal as an output;
an analog to digital converter receiving the live video signal and converting it to a digital live video signal;
a disk drive receiving and storing the digital live video signal input as it is produced by the analog to digital converter and providing as an output a stored digital video signal;
a digital to analog converter receiving the stored digital video signal and producing an analog video signal;

an output circuit that provides an output signal formatted for display on a video display;
a switch that routes a signal to the digital to analog converter;
a controller that directs the switch to provide one of the digital live video signal and the stored digital video signal to the digital to analog converter; and
wherein the controller receives user ~~commands and~~ commands, and
responsive to a user command to change a received television channel when the stored
video signal is being provided to the output circuit the controller [[,] commands the switch to route the digital live video signal to the digital to analog converter and further commands the
tuner to change tuning to the channel selected by the user.

33. (Original) The apparatus according to claim 32, wherein the output circuit comprises a modulator.

34. (Original) The apparatus according to claim 32, wherein the output circuit provides the output signal formatted as one of NTSC, PAL, DVI and MPEG.

35. (Original) The apparatus according to claim 32, wherein responsive to a user command to implement an effect using the disk drive, the controller commands the switch to route the stored digital video signal to the digital to analog converter.

36. (Original) The apparatus according to claim 35, wherein the effect comprises a live pause effect.

37. (Withdrawn) A personal video recorder device, comprising:

 a tuner receiving a video signal input and producing a live video signal as an output;
 an analog to digital converter receiving the live video signal and converting it to a digital live video signal;
 a disk drive receiving and storing the digital live video signal input as it is produced by the analog to digital converter and providing as an output a stored digital video signal;
 a digital to analog converter receiving the stored digital video signal and producing an analog video signal;

an output circuit that provides an output signal to a video display;
a switch that routes a signal to the digital to analog converter;
a controller that directs the switch to route one of the digital live video signal and the stored digital video signal to the digital to analog converter; and
wherein the controller receives user commands and responsive to a user command to implement an effect using the disk drive, the controller commands the switch to route the stored digital video signal to the digital to analog converter.

38. (Withdrawn) The apparatus according to claim 37, wherein the output circuit comprises a modulator.

39. (Withdrawn) The apparatus according to claim 37, wherein the output circuit provides the output signal formatted as one of NTSC, PAL, DVI and MPEG.

40. (Withdrawn) The apparatus according to claim 37, wherein responsive to a user command change a channel, the controller commands the switch to route the digital live video signal to the digital to analog converter.

41. (Withdrawn) The apparatus according to claim 40, wherein the effect comprises a live pause effect.

42. (Withdrawn) A personal video recorder device, comprising:

input circuit receiving a video signal input and producing a live video signal as an output;
a disk drive storing a representation of the live video signal input as it is received by the input circuit and providing as an output a stored video signal;
an output circuit that provides an output signal suitable for driving a video display;
switching means for routing a signal to the output circuit;
control means for controlling the switching means; and
wherein the control means receives user commands and responsive to a user commands operates the switching means in one of a live video output mode and a delayed video output mode, wherein in the delayed video output mode the switching means routes a signal to the

output circuit by retrieval of the stored video signal and wherein in the live video output mode the switching means routes a signal to the output circuit without storage and retrieval in the disk drive.

43. (Withdrawn) The apparatus according to claim 42, wherein responsive to a command to change a channel, the control means controls the switching means to operate in the live video output mode.

44. (Withdrawn) The apparatus according to claim 42, wherein responsive to a command to implement an effect using the disk drive, the control means controls the switching means to operate in the delayed video output mode.

45. (Withdrawn) The apparatus according to claim 44, wherein the effect comprises a live pause effect.

46. (Withdrawn) A personal video recorder device, comprising:

 a tuner receiving a video signal input and producing a video transport stream as an output;

 a demultiplexer receiving the transport stream and extracting digital live video signal therefrom;

 a disk drive receiving and storing the digital live video signal input from the demultiplexer and providing as an output a stored digital video signal;

 an output circuit that provides an output signal suitable for display on a video display;

 a switch that routes a signal to the output circuit;

 a controller that directs the switch to provide one of the digital live video signal and the stored digital video signal to the output circuit; and

 wherein the controller receives user commands and responsive to a user command to change a channel, commands the switch to route the live digital video signal to the output circuit.

47. (Withdrawn) The apparatus according to claim 46, wherein the output circuit comprises one of a digital data formatter and a modulator.

48. (Withdrawn) The apparatus according to claim 46, wherein the output circuit provides the output signal formatted as one of NTSC, PAL, DVI and MPEG.

49. (Withdrawn) The apparatus according to claim 46, wherein responsive to a user command to implement an effect using the disk drive, the controller commands the switch to route the stored digital video signal to the output circuit.

50. (Withdrawn) A personal video recorder device, comprising:

 a tuner receiving a video signal input and producing a video transport stream as an output;

 a demultiplexer receiving the transport stream and extracting digital live video signal therefrom;

 a disk drive receiving and storing the digital live video signal input from the demultiplexer and providing as an output a stored digital video signal;

 an output circuit that provides an output signal suitable for display on a video display;

 a switch that routes a signal to the output circuit;

 a controller that directs the switch to provide one of the digital live video signal and the stored digital video signal to the output circuit; and

 wherein the controller receives user commands and responsive to a user command to implement an effect using the disk drive, the controller commands the switch to route the stored digital video signal to the output circuit.

51. (Withdrawn) The apparatus according to claim 50, wherein the output circuit comprises one of a digital data formatter and a modulator.

52. (Withdrawn) The apparatus according to claim 50, wherein the output circuit provides the output signal formatted as one of NTSC, PAL, DVI and MPEG.

53. (Withdrawn) The apparatus according to claim 50, wherein responsive to a user command to implement an effect using the disk drive, the controller commands the switch to route the stored digital video signal to the output circuit.

54. (Withdrawn) A method of controlling operation of a personal video recorder (PVR), comprising:

receiving an input signal from a video source;

storing a representation of the video signal on a hard disk drive;

providing a video output signal;

controlling a source of the output signal by determining if a channel change command has been issued, wherein:

if a channel change command has not been issued, selecting the source of the output signal to be from the hard disk drive; and

if a channel change command has been issued, selecting the source of the output signal to be from a source prior to the hard disk drive so that the source of the output signal is not delayed by storage to and retrieval from the hard disk drive.

55. (Withdrawn) The method according to claim 54, further comprising:

controlling a source of the output signal by determining if an effect command has been issued, wherein:

if an effect command has been issued, selecting the source of the output signal to be from the hard disk drive; and

if an effect command has not been issued, selecting the source of the output signal to be from a source prior to the hard disk drive so that the source of the output signal is not delayed by storage to and retrieval from the hard disk drive.

56. (Withdrawn) The method according to claim 55, wherein the effect comprises a live pause effect.

57. (Withdrawn) An electronic storage medium storing instructions that when executed on a programmed processor carry out the method according to claim 54.

58. (Withdrawn) A method of controlling operation of a personal video recorder (PVR), comprising:

receiving an input signal from a video source;

storing a representation of the video signal on a hard disk drive;

providing a video output signal;

controlling a source of the output signal by determining if an effect command has been issued, wherein:

if an effect command has been issued, selecting the source of the output signal to be from the hard disk drive; and

if an effect command has been issued, selecting the source of the output signal to be from a source prior to the hard disk drive so that the source of the output signal is not delayed by storage to and retrieval from the hard disk drive.

59. (Withdrawn) The method according to claim 58, wherein the effect comprises a live pause effect.

60. (Withdrawn) An electronic storage medium storing instructions that when executed on a programmed processor carry out the method according to claim 58.

61. (Withdrawn) A method of controlling operation of a personal video recorder, comprising:

at a tuner, receiving an input signal containing television programming;

storing a digital representation of the television programming to a storage medium;

retrieving the digital representation from the storage medium;

presenting the retrieved digital representation to an output in a format suitable for display on a television display; and

receiving a channel change command, and in response thereto presenting a representation of the television programming received at the tuner to the output without the storing and retrieving.

62. (Withdrawn) The method according to claim 61, further comprising receiving an effect command, and in response thereto presenting the retrieved digital representation to the output.

63. (Withdrawn) The method according to claim 62, wherein the effect comprises a live pause effect.

64. (Withdrawn) An electronic storage medium storing instructions that when executed on a programmed processor carry out the method according to claim 61.

65. (Withdrawn) A method of controlling operation of a personal video recorder, comprising:

at a tuner, receiving an input signal containing television programming;

storing a digital representation of the television programming to a storage medium;

sending a representation of the input signal to an output formatted for display on a display as live video; and

receiving an effect command, and in response thereto retrieving the digital representation from the storage medium and presenting the retrieved digital representation to the output as delayed video.

66. (Withdrawn) The method according to claim 65, further comprising receiving a channel change command, and in response thereto presenting a representation of the television programming received at the tuner to the output without the storing and retrieving.

67. (Withdrawn) The method according to claim 65, wherein the effect comprises a live pause effect.

68. (Withdrawn) An electronic storage medium storing instructions that when executed on a programmed processor carry out the method according to claim 57.